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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/704,994	11/02/2000	Avinash Jain	PA000106	3922
23696	7590	08/25/2004		
Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714			EXAMINER PEREZ GUTIERREZ, RAFAEL	
			ART UNIT 2686	PAPER NUMBER 11

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/704,994

Applicant(s)

Jain et al.

Examiner

Rafael Perez-Gutierrez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,5-21,24,26-29,31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-21,24,26-29,31 and 32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### DETAILED ACTION

1. This Action is in response to Applicant's amendment filed on May 27, 2004. **Claims 1, 3, 5-21, 24, 26-29, 31, and 32** are now pending in the present application. **This Action is made FINAL.**

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1, 3, 5, 7-21, 24, 26-29, and 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Selby (European Patent Application Publication # 0 260 763)** in view of **Sawyer et al. (U.S. Patent # 5,920,814)**, both of record.

Consider **claims 1, 3, 28, and 29**, Selby clearly discloses a method for registering with a plurality of registration zones in a wireless communications network (abstract), the method comprising:

registering with a first base station in a first temporary zone (column 7 lines 30-42);

receiving, via means for receiving 2 (figure 2), an assignment for a first identity from a first network entity (base station) in response to registration with a first registration zone (column 7 lines 31-42);

registering, via means for registering 1, 3 (figure 2), with a second network entity (base station) in a second registration zone (column 8 lines 20-56);

receiving, via means for receiving 2 (figure 2), an assignment for a second registration identity from the second network entity in response to registration with the second registration zone (column 8 lines 20-56);

maintaining, via computer system 3 (figure 2), a first timer 55 (counter) (figure 2) to provide an indication to initiate timer-based registration (column 15 lines 1-31 and column 17

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line 53 - column 18 line 2); and

initiating, via computer system 3 (figure 2), timer-based registration if a value in the first timer 55 (counter) exceeds a predetermined time (timer-based registration count value) (column 15 lines 1-31 and column 17 line 53 - column 18 line 2)).

However, Selby does not explicitly states that the system assigns a Temporary Mobile Subscriber Identity (TMSI) to the mobile station when it registers in each different service region.

Sawyer et al. clearly show and disclose a method for managing multiple Temporary Mobile Station Identities (TMSIs) and a method and apparatus for registering with a plurality of service areas (registration zones; Radio Temporary Mobile Station Identity (R-TSMI) zones) in a radio (wireless) telecommunication network (abstract), comprising:

receiving, at a mobile station (MS) TMSI status module 26 (means for receiving) (figure 2), an assignment for a first Temporary Mobile Station Identity (TMSI<sub>1</sub>) (R-TSMI code) from the first mobile switching center/base station 21 (MSC/BS) (network entity) (figure 1A step 3, column 2 lines 46-65, and column 5 lines 1-3) in response to registration with a first service area (registration zone; R-TMSI zone) (figure 1A step 2, column 2 lines 46-65, and column 4 line 67 - column 5 line 1); and

receiving, at the MS TMSI status module 26 (means for receiving) (figure 2), an assignment for a second TMSI<sub>2</sub> (R-TMSI code) from the second mobile switching center/base station 21 (MSC/BS) (network entity) (figure 1B step 14, column 2 lines 46-65, and column 5 line 26) in response to registration with the second service area (registration zone; R-TMSI zone)

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(figure 1B step 13, column 2 lines 46-65, and column 5 lines 19-26).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the assignment technique disclosed by Sawyer et al. in the method taught by Selby in order to enhance the efficiency of the system by assigning different TMSIs in different zones. Increased signaling capacity as well as reduced overhead are achieved with this technique due to the reduction in the number of registration requests required by the mobile station.

Consider **claims 5 and 31**, and **as applied to claims 1 and 28 above**, Selby, as modified by Sawyer et al., further discloses the steps of:

receiving, via computer system 3 (figure 2), a value representative of a maximum expiration period for timer-based registration (column 15 line 1 - column 21 line 45); and

setting, via computer system 3 (figure 2), the timer-based registration count value based on the received value (column 15 line 1 - column 21 line 45).

Consider **claim 7**, and **as applied to claim 1 above**, Selby, as modified by Sawyer et al., further discloses that the registration with the second network entity is in response to entering the second registration zone (column 8 lines 20-56).

Consider **claim 8**, and **as applied to claim 1 above**, Selby, as modified by Sawyer et al., also discloses that the registration with the second network entity is implicitly performed in response to establishing a connection with the second network entity (column 8 lines 20-56).

Consider **claim 9**, and **as applied to claim 1 above**, Selby, as modified by Sawyer et al., further discloses that the first registration zone is entered first and the second registration zone is

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subsequently entered (column 8 lines 20-56), the method further comprising:

activating a first timer for the first registration zone upon registration with the second network entity (column 5 lines 18-23 and column 15 line 1 - column 21 line 45).

Consider **claims 10 and 11**, and **as applied to claim 9 above**, Selby, as modified by Sawyer et al., also discloses:

updating a count value for the first timer at each update interval (column 13 line 1 - column 21 line 45); and

timing out registration with the first registration zone if a count value for the first timer exceeds a time-out value, wherein said time-out value is provided by the second network entity (column 13 line 1 - column 21 line 45).

Consider **claim 12**, and **as applied to claim 1 above**, Selby, as modified by Sawyer et al., further discloses the step of deactivating a second timer for the second registration zone upon registration with the second network entity (column 13 line 1 - column 21 line 45).

Consider **claim 13**, and **as applied to claim 1 above**, Selby, as modified by Sawyer et al., also discloses the step of maintaining a zone list having a plurality of entries, one entry for each registration zone in which TMSI has been assigned and with which registration is currently valid (column 13 line 1 - column 21 line 45).

Consider **claim 14**, and **as applied to claim 13 above**, Selby, as modified by Sawyer et al., further discloses the steps of receiving a value indicative of a maximum number of registration zones with which registration is allowed and deleting one or more entries from the zone list such that the number of entries maintained in the zone list is equal to or less than the

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maximum number of allowable registration zones (column 13 line 1 - column 21 line 45).

Consider **claim 15**, and **as applied to claim 14 above**, Selby, as modified by Sawyer et al., also discloses that the oldest entries in the zone are deleted first (column 13 line 1 - column 21 line 45).

Consider **claim 16**, and **as applied to claim 15 above**, Selby, as modified by Sawyer et al., further discloses that the oldest entries in the zone list are determined by associated timers activated for the entries (column 13 line 1 - column 21 line 45).

Consider **claim 17**, and **as applied to claim 13 above**, Selby, as modified by Sawyer et al., also discloses that each entry in the zone list corresponds to an active registration zone, and wherein each entry includes a zone number of the active registration zone, a zone code assigned for the active registration zone, and an entry timer for providing an indication used to time out registration with the active registration zone (column 13 line 1 - column 21 line 45).

Consider **claim 18**, and **as applied to claim 17 above**, Selby, as modified by Sawyer et al., further discloses that each entry in the zone list further includes a time-out count indicative of a maximum timeout period for registration with the active registration zone, and wherein a timeout period for registration with the active registration zone, and wherein a timeout period for registration with the active registration zone is determined based in part on the timeout count (column 13 line 1 - column 21 line 45).

Consider **claim 19**, and **as applied to claim 1 above**, Selby, as modified by Sawyer et al., also discloses that registration is enabled while in a connected state indicative of an established connection between a mobile station and a base station (column 8 lines 19-56).



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Consider **claim 20**, and **as applied to claim 1 above**, Selby, as modified by Sawyer et al., further discloses that radio resource (RR) level registration is enabled via a message from a network entity, and timer-based registration is enabled via a message from a network entity (column 8 lines 19-56).

Consider **claim 21**, and **as applied to claim 1 above**, Selby, as modified by Sawyer et al., also discloses that timer-based registration is enabled via a message from a network entity (column 8 lines 19-56).

Consider **claims 24 and 27**, Selby clearly discloses a method for registering with a plurality of registration zones in a wireless communications network (abstract), the method comprising:

registering with a first base station in a first temporary zone (column 7 lines 30-42);

receiving, via means for receiving 2 (figure 2), an assignment for a first identity from a first network entity (base station) in response to registration with a first registration zone (column 7 lines 31-42);

registering, via means for registering 1, 3 (figure 2), with a second network entity (base station) in a second registration zone (column 8 lines 20-56);

receiving, via means for receiving 2 (figure 2), an assignment for a second registration identity from the second network entity in response to registration with the second registration zone (column 8 lines 20-56);

activating a first timer for the first registration zone upon registration with the second network entity (column 5 lines 18-23 and column 15 line 1 - column 21 line 4); and

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deactivating a second timer for the second registration zone upon registration with the second network entity (column 13 line 1 - column 21 line 4).

However, Selby does not explicitly states that the system assigns a Temporary Mobile Subscriber Identity (TMSI) to the mobile station when it registers in each different service region.

Sawyer et al. clearly show and disclose a method for managing multiple Temporary Mobile Station Identities (TMSIs) and a method and apparatus for registering with a plurality of service areas (registration zones; Radio Temporary Mobile Station Identity (R-TSMI) zones) in a radio (wireless) telecommunication network (abstract), comprising:

receiving, at a mobile station (MS) TMSI status module 26 (means for receiving) (figure 2), an assignment for a first Temporary Mobile Station Identity (TMSI<sub>1</sub>) (R-TSMI code) from the first mobile switching center/base station 21 (MSC/BS) (network entity) (figure 1A step 3, column 2 lines 46-65, and column 5 lines 1-3) in response to registration with a first service area (registration zone; R-TSMI zone) (figure 1A step 2, column 2 lines 46-65, and column 4 line 67 - column 5 line 1); and

receiving, at the MS TMSI status module 26 (means for receiving) (figure 2), an assignment for a second TMSI<sub>2</sub> (R-TSMI code) from the second mobile switching center/base station 21 (MSC/BS) (network entity) (figure 1B step 14, column 2 lines 46-65, and column 5 line 26) in response to registration with the second service area (registration zone; R-TSMI zone) (figure 1B step 13, column 2 lines 46-65, and column 5 lines 19-26).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

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the invention was made to incorporate the assignment technique disclosed by Sawyer et al. in the method taught by Selby in order to enhance the efficiency of the system by assigning different TMSIs in different zones. Increased signaling capacity as well as reduced overhead are achieved with this technique due to the reduction in the number of registration requests required by the mobile station.

Consider **claim 26**, and **as applied to claim 24 above**, Selby, as modified by Sawyer et al., also discloses:

updating a count value for the first timer at each update interval (column 5 lines 13-31, column 9 lines 30-55, column 10 lines 25-54, and column 13 line 1 - column 21 line 45); and

timing out registration with the first registration zone if a count value for the first timer exceeds a time-out value (column 5 lines 13-31, column 9 lines 30-55, column 10 lines 25-54, and column 13 line 1 - column 21 line 45).

4. **Claims 6 and 32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Selby (**European Patent Application Publication # 0 260 763**) in view of Sawyer et al. (**U.S. Patent # 5,920,814**), as **applied to claims 5 and 31 above**, and further in view of Fehnel (**U.S. Patent # 6,064,889**), each of record.

Consider **claims 6 and 32**, and **as applied to claims 5 and 31 above**, Selby, as modified by Sawyer et al., discloses the claimed invention except that the timer-based registration count value is a pseudo random value in a range between zero and a maximum value related to the received value.

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Fehnel clearly discloses a method and apparatus for registering with a plurality of registration zones in a wireless communications network (abstract) comprising receiving a value representative of a maximum expiration period for timer-based registration (column 12 lines 9-44) and setting the timer-based registration count value based on the received value (column 12 lines 9-44), wherein the timer-based registration count value is a pseudo random value in a range between zero and a maximum value related to the received value (column 13 lines 31-49).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further incorporate the timer-setting technique disclosed by Fehnel into the combined method and apparatus of Selby and Sawyer et al. in order to better control periodic registrations in the system.

### ***Response to Arguments***

5. Applicant's arguments filed May 27, 2004 have been fully considered but they are not persuasive.

Regarding **claims 1 and 28**, Applicant argues, on page 13 first full paragraph of the remarks, that Selby does not teach maintaining a first counter to provide an indication to initiate timer-based registration and initiating timer-based registration if a value in the first counter exceeds a timer-based registration count value.

The Examiner respectfully disagrees with Applicant argument because, as explained above, Selby clearly shows and discloses maintaining a first timer 55 (counter) to provide an

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indication to initiate timer-based registration and initiating timer-based registration if a value in the first timer 55 (counter) exceeds a predetermined time (timer-based registration count value) in figure 2, column 15 lines 1-31, and column 17 line 53 - column 18 line 2.

Regarding **claims 24 and 27**, Applicant argues, on page 13 last paragraph - page 14 first full paragraph of the remarks, that Selby does not teach activating a first timer for the first registration zone upon registration with the second network entity and deactivating a second timer for the second registration zone upon registration with the second network entity.

The Examiner respectfully disagrees with Applicant argument because, as explained above, Selby clearly discloses activating a first timer for the first registration zone upon registration with the second network entity (see column 5 lines 18-23 and column 15 line 1 - column 21 line 4) and deactivating a second timer for the second registration zone upon registration with the second network entity (see figures 3 and 8 and column 13 line 1 - column 21 line 4).

Therefore, in view of the above reasons and having addressed each of Applicant's arguments, the previous rejection is maintained and made FINAL by the Examiner.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any response to this Office Action should be **faxed to (703) 872-9306 or mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

220 S. 20<sup>th</sup> St.  
Crystal Plaza Two, Lobby, Room 1B03  
Arlington, VA 22202

8. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Rafael Perez-Gutierrez whose telephone number is (703) 308-8996. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

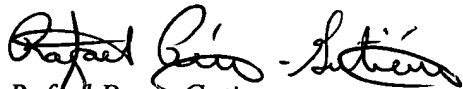
If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's

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supervisor, Marsha D. Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

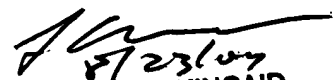
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700 or call customer service at (703) 306-0377.



Rafael Perez-Gutierrez

R.P.G./rpg **RAFAEL PEREZ-GUTIERREZ**  
**PATENT EXAMINER**

August 21, 2004

  
8/23/04  
**LESTER G. KINCAID**  
**PRIMARY EXAMINER**